

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 002-ST-04-PCT	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/IT2005/000081	International filing date (day/month/year) 16/02/2005	(Earliest) Priority Date (day/month/year) 01/04/2004
Applicant SIGMA-TAU INDUSTRIE FARMACEUTICHE RIUNITE S.P.A.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

ANIONIC HYDROGEL MATRICES WITH PH DEPENDENT MODIFIED RELEASE AS DRUG CARRIERS

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☒ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IT2005/000081

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K9/16 A61K47/34 A61K31/205 A61K9/70

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, MEDLINE, CHEM ABS Data, PASCAL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	PITARRESI G ET AL: "Drug release from alpha,beta-poly(N-2-hydroxyethyl)-DL-aspar- tamide-based microparticles" BIOMATERIALS, vol. 25, no. 18, August 2004 (2004-08), pages 4333-4343, XP004497095 ISSN: 0142-9612 the whole document	1-19
P,X	MANDRACCHIA DELIA ET AL: "PH-Sensitive hydrogel based on a novel photocross-linkable copolymer" BIOMACROMOLECULES, vol. 5, no. 5, September 2004 (2004-09), pages 1973-1982, XP002331189 ISSN: 1525-7797 cited in the application the whole document	1-19

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

15 June 2005

Date of mailing of the international search report

28/06/2005

Name and mailing address of the ISA

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Villa Riva, A

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IT2005/000081

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 071 508 A (STECKLER ET AL) 31 January 1978 (1978-01-31) abstract column 2, lines 43-47 column 2, line 59 - column 3, line 5 column 9, lines 7-9 -----	1,2,6-9, 15,16
X	US 6 458 386 B1 (SCHACHT ETIENNE ET AL) 1 October 2002 (2002-10-01) abstract column 1, lines 9-21 column 7, lines 1-16,26,27 column 7, line 51 - column 8, line 25 column 10, lines 37-59 example 1 -----	1,2, 6-10,15, 16
X	WO 00/45792 A (POWDERJECT RESEARCH LIMITED; BURKOTH, TERRY, LEE; O'CONNOR, BARBARA, H) 10 August 2000 (2000-08-10) abstract page 3, lines 10-17 page 9, lines 15-20 page 10, line 26 - page 11, line 15 page 11, line 29 - page 12, line 7 -----	1,2, 6-11, 15-17,19
X	US 2003/152623 A1 (BROMBERG LEV E ET AL) 14 August 2003 (2003-08-14) abstract paragraphs '0014!', '0016!' - '0019! paragraphs '0050!' - '0052! paragraphs '0079!' - '0085! paragraphs '0127!', '0130! claims -----	1,2, 5-11, 14-17,19
A	GIAMMONA G ET AL: "Glycidyl methacrylate derivatization of alpha,beta-poly(N-hydroxyethyl- 1)-dl-aspartamide and alpha,beta-polyasparthydrazide" POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB, vol. 38, no. 13, June 1997 (1997-06), pages 3315-3323, XP004064983 ISSN: 0032-3861 the whole document ----- -/--	1-19

INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>GIAMMONA G ET AL: "New biodegradable hydrogels based on a photocrosslinkable modified polyaspartamide: synthesis and characterization" BBA - GENERAL SUBJECTS, ELSEVIER SCIENCE PUBLISHERS, NL, vol. 1428, no. 1, 28 June 1999 (1999-06-28), pages 29-38, XP004276327 ISSN: 0304-4165 the whole document</p> <p style="text-align: center;">-----</p>	1-19

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IT2005/000081

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4071508	A	31-01-1978	NONE	
US 6458386	B1	01-10-2002	AT 295189 T AU 736784 B2 AU 8110198 A CA 2290806 A1 WO 9855161 A1 EP 0986408 A1 JP 3602145 B2 JP 2002506431 T	15-05-2005 02-08-2001 21-12-1998 10-12-1998 10-12-1998 22-03-2000 15-12-2004 26-02-2002
WO 0045792	A	10-08-2000	AU 780397 B2 AU 2309200 A BR 0007974 A CA 2361555 A1 CN 1345232 A EP 1146861 A1 WO 0045792 A1 JP 2002536317 T NZ 513538 A US 2002061336 A1	17-03-2005 25-08-2000 30-10-2001 10-08-2000 17-04-2002 24-10-2001 10-08-2000 29-10-2002 27-02-2004 23-05-2002
US 2003152623	A1	14-08-2003	CA 2474711 A1 EP 1478403 A1 WO 03063909 A1	07-08-2003 24-11-2004 07-08-2003